What is claimed is:

1. A method of routing a wireless signal between two points, said method comprising the steps of:

transmitting a wireless signal from an originating transmitter;

receiving said wireless signal at a first set of repeating transceivers;

in each said repeating transceiver, delaying said wireless signal by at least one predetermined delay and re-transmitting said wireless signal; and

receiving said re-transmitted wireless signals at a destination receiver.

2. The method of claim 1, wherein the signal received at each said repeating transceiver is mixed to an intermediate frequency before said re-transmitting.

3. The method of claim 1, wherein the signal received at each said repeating transceiver is digitized before said re-transmitting.

4. The method of claim 1, wherein the signal received at each said repeating transceiver is processed through an FIR filter before said re-transmitting.

5. The method of claim 1, wherein the signal received at each said repeating transceiver is converted to an analog signal before said re-transmitting.

6.   The method of claim 1, wherein the signal received at each said repeating transceiver is up-shifted in frequency before said re-transmitting.

7.   The method of claim 1, wherein said predetermined delay is programmable.

8.   An apparatus for dynamically routing wireless signals, said apparatus comprising:

     an plurality of spatially disparate transceivers, wherein each said transceiver comprises:

         a receiver for receiving a wireless signal;

         an A/D converter for digitizing said wireless signal;

         an FIR filter fed by said A/D converter;

         a D/A converter fed by said FIR filter; and

         a transmitter fed by said D/A converter;

     wherein said transceiver re-transmits said wireless signal after a predetermined delay.

9.   The apparatus of claim 8, wherein said transceiver further comprises a frequency down-shifting mixer and a frequency up-shifting mixer.

10.   The apparatus of claim 9, wherein said frequency down-shifting mixer is connected between the output of said receiver and the input of said A/D converter.

11.   The apparatus of claim 9, wherein said frequency up-shifting mixer is connected between the output of said D/A converter and the input of said transmitter.

1   12. The apparatus of claim 9, wherein said transmitter

2   comprises said frequency up-shifting mixer.

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4   13. The apparatus of claim 9, wherein said transceiver

5   further comprises a local oscillator coupled to said down-

6   shifting mixer for down-shifting the frequency of said

7   wireless signal.

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9   14. The apparatus of claim 8, wherein said transceiver

10   further comprises a low pass filter connected between the

11   output of said receiver and the input of said A/D

12   converter.

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14   15. A transceiver for use in a system for dynamically

15   routing wireless signals, said transceiver comprising:

16   means for receiving a wireless signal;

17   means for modulating said wireless signal, said

18   modulating means coupled to said receiving means;

19   means for digitizing said wireless signal, said

20   digitizing means coupled to said modulating means;

21   means for delaying transmission of said wireless

22   signal, said delaying means coupled to said digitizing

23   means;

24   means for amplifying said wireless signal, said

25   amplifying means coupled to said delaying means; and

26   means for transmitting said wireless signal, said

27   transmitting means coupled to said amplifying means.

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1   16. A method of routing a wireless signal between two

2   points, said method comprising the steps of:

3   transmitting a wireless signal as a plurality of

4   wireless signals;

5   receiving said plurality of wireless signals at a

6   repeating transceiver as a received plurality of wireless

7   signals;

8   in said repeating transceiver, delaying each of said

9   plurality of wireless signals by a separately predetermined

10 delay to produce a set of delayed wireless signals;

11   combining said delayed wireless signals into a

12 reconstituted wireless signal; and

13   re-transmitting said reconstituted wireless signal.

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15 17. The method of claim 16, wherein each of said received

16 plurality of wireless signals is mixed to an intermediate

17 frequency before being delayed by said separately

18 predetermined delay.

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20 18. The method of claim 16, wherein each wireless signal

21 received at each said repeating transceiver is digitized

22 before said re-transmitting.

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24 19. The method of claim 16, wherein each wireless signal

25 received at each said repeating transceiver is processed

26 through an FIR filter before said re-transmitting.

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28 20. The method of claim 16, wherein each wireless signal

29 received at each said repeating transceiver is converted to

30 an analog signal before said re-transmitting.

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1   21. The method of claim 16, wherein said reconstituted

2   wireless signal at each said repeating transceiver is up-

3   shifted in frequency before said re-transmitting.

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5   22. The method of claim 16, wherein each of said

6   separately predetermined delays is programmable.

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